<center>**REMARKS**</center>

Rejections under 35 USC 112

Claims 54-56 are rejected under 35 USC 112 as lacking structural claim elements. This is overcome by recasting 54-56 as method claims. Claim 55 is further amended to correct a typing error in its dependency.

Claims 54-55 are further rejected under 35 USC 112 over the limitation of executing a command "without determining the probabilities for other commands that might be desired by the user". The Examiner contends this phrase is not supported by the specification. But Applicants note that it is supported in the specification by the following passage:

> "[T]he natural language search engine 32 interprets which application command 56 ... is **likely desired by the user** based on a historical probability. Where a user command has a high likelihood, the natural language search engine 32 will **invoke that user command rather than expending processor resources searching for other alternatives**." (application, p.6, lines 3-8, emphasis added)

Independent Claim 2

Independent claim 2 and its dependent claims 3-4 are each rejected over the combination of Beauregard, Eide and Laursen. Claims 3-4 are herein canceled and their limitations added to claim 2 with some rewording.

Claim 2 thus now includes the limitations of:

A) **while** receiving an abbreviated command, displaying a list of probable commands;

B) the user enters remaining characters of the command after the list is displayed; and

C) narrowing the list based on the user's entry of remaining characters.

These limitations A-C are exemplified in the specification by a user entering "e_j", which could be an abbreviation for the complete commands of "email john" and "email jane".[1] While receiving the abbreviated command, the system displays a list of probable commands. The user can select a command from the list or continue entering the command text characters to narrow the list. [2]

Limitations A-C (above) are not taught by the cited references, as explained for each limitation individually below:

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[1] application, p. 6, lines 20-21

[2] application, p. 8, lines 1-4; p. 9, line 17

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<u>The References fail to teach limitation A: displaying a list **while** command text is entered</u>

The Office Action (p.8, last par.; p.9, 1st par.) contends that limitation A, of displaying a list of probable commands "while" receiving the abbreviated command, is taught by Beauregard, col. 42, lines 27-50. However, that passage of Beauregard does not mention displaying the list of commands "while" the command is being entered as claimed. On the contrary, Beauregard states repeatedly[3] that his list is displayed only after the user presses the space bar twice to denote end of command entry.

<u>The References fail to teach limitation B: entering remaining characters of command</u>

The Office Action (p.10, referring to claim 4, whose limitations are now in claim 2) contends that limitation B, of the user continuing to enter characters of the command after the list of commands is displayed, is taught by Beauregard, col. 18, lines 1-4:

> "3) **No match is found** in the wordbase 340. The word is, therefore, assumed to be a **content word**. The ActiveWords **system takes no action**, and continues monitoring the text stream for the next action word." (Beauregard, col. 18, lines 1-4, emphasis added)

Applicants counter that this cited passage from Beauregard is unrelated to limitation B on three grounds: 1) Beauregard's introduction (col. 17, lines 31-32) to the cited passage explains that the cited passage occurs after "the user has **finished** a word". In contrast, in limitation B, the user is still entering characters of command text. 2) In the cited passage, Beauregard's computer determines that the entered text was **not** a command (but instead a "content word") because it does not match ("No match is found") any command in database 340. In contrast, limitation B requires the text to be a command. 3) In the cited Beauregard passage, no list of commands is displayed ("system takes no action" because the entered word was not a command). In contrast, limitation B requires a list to have been displayed. Thus, on three grounds, the cited passage from Beauregard does not disclose the limitation (limitation B) it was cited for.

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[3] col. 9, line 9; col. 15, line 49; col. 17, line 55; col. 38, line 25; col. 42, line 66; col. 44, line 53

<u>The References fail to teach limitation C: narrowing the list of commands</u>

The Office Action (p.9, 4th par.) cites Laursen as teaching limitation C, of narrowing the list of probable commands based on the user's entry of remaining characters of the command.

However, Laursen does not teach narrowing a list of probable **commands**; in fact, Laursen is irrelevant to entering commands. Laursen instead narrows a list of **records** (col. 1, line 15) exemplified as names in an address list.

Laursen's teaching of successively narrowing a list of **names** in response to entered text would not motivate the skilled person to modify Beauregard to successively narrow a list of **commands** to arrive at claim 2. That is because the user would consider doing so to be uncalled-for in Beauregard's application and unlikely to succeed, for the following four reasons: 1) In Laursen, the text being entered is a person's name, whereas in Beauregard, the text is a computer command. 2) In Laursen, the text is entered in response to a query (col. 5, line 67), whereas in Beauregard, the text is entered freestyle on the user's own volition (*e.g.*, entering "dial" command while typing an email in col. 44, line 42). 3) In Laursen, the type of data being entered is pre-defined (*e.g.*, name). Whereas in Beauregard, the text is a command to perform any function or application that the computer supports. 4) In Laursen, the user is entering an **un**abbreviated version of the text before the computer displays text suggestions. Whereas in Beauregard, the user's text command can be abbreviated (such as "msw" for Microsoft Word) or unabbreviated. For these reasons, Laursen's teaching (of successively narrowing a list of **names**) would not suggest successively narrowing Beauregard's list of **commands** to arrive at claim 2.

Therefore, on several grounds, the rejection of claim 2 is incorrect and should be withdrawn.

Independent Claims 37

Independent claims 37 and its dependent claims 38-40 are each rejected over Beauregard in view of Eide. Claims 38-40 are herein canceled and their limitations added to claim 37, with some rewording.

Claim 37 thus now includes the steps of:

A) before receiving the entire abbreviated textual command, displaying a probable set of complete commands to the user; and

B) instead of selecting a command from the list, the user continues to enter characters of the command to narrow the set of commands.

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These steps are similar to steps A and B described above for claim 2, and are exemplified in the specification as explained above with reference to claim 2.

The Office Action (p. 14, in rejecting claim 40 whose limitation is now in claim 37) cites Eide p.29 as teaching the limitations of limitation B (of the user entering additional characters of the command to narrow the list instead of selecting a command from the list). Applicants counter that this citation from Eide teaches none of the limitations it was cited for. In the citation from Eide, a user types "ls sou" and a tab key, which prompts to the computer to automatically complete the command string to read "ls sources", after which the user presses the Return key to execute the command. Eide thus lacks the claimed "list" presented to the user; since the user is given no list. Eide further lacks the claimed "user enter[ing] a further portion of the abbreviated textual command", since Eide's user simply presses Return. It yet further lacks the claimed "narrowing the probable subset" of commands.

Therefore, the rejection of claim 37 should be withdrawn.

Independent Claim 48

Claim 48 recites the steps of _receiving_ a text string being entered by a user, _comparing_ the received portion of the text string to stored text commands to determine a probable text command, and _initiating_ a corresponding software operation corresponding to the probable text command.

Claim 48 is amended to include the limitation that the comparing and initiating steps are performed "without the user having entered a delimiter denoting an end of the text string." In contrast to this limitation, both cited references, to Beauregard and Eide, process a command only after receiving a delimiter denoting end of text string. In Beauregard, the delimiter is a double-space (col. 9, line 9). In Eide, it is a tab (p. 37, 2nd par.) or escape key (p. 37, 4th par.).

This limitation of "without the user having entered a delimiter" was added in a previous Amendment (filed 5/3/07). The subsequent Office Action (mailed 7/26/07) declared it new matter. So the following Amendment (filed 10/24/07) deleted it, with traverse, asserting that "this limitation is implicitly supported in the specification on p. 8 and the related flow chart of Fig. 6. However, to facilitate prosecution of this application, this limitation is herein removed from the claims." The current outstanding Office Action (p.3) notes that "applicant's argument regarding the lack of a delimiter is not convincing because such a limitation is not recited in the claims. It is worth noting though, that such a limitation would constitute new matter if added to the claims, as per the office action from 7/26/07." This suggests that this limitation might render claim 48 patentable if it were supported in the specification.

Accordingly, this limitation is now re-added to claim 48 for purposes of appeal. Applicants intend to argue that this limitation is indeed supported in the application by the following passages in conjunction with Fig. 6:

"[T]he natural language search engine 32 will display a list of possible commands to the user in step 86. In step 88, the user may select from the list of possible commands, or alternatively may narrow the list by entering more text." (application, p.8, lines 2-4)

and

"For example, the user may chose ... **"e_j"** to always represent the user command 'email jim.' In this manner, **only two key strokes** are required to invoke the email composer application 34, and select the addressee 'jim.' " (application, p.9, lines 1-5, emphasis added)

APPLICATION FIG. 6

Fig. 6

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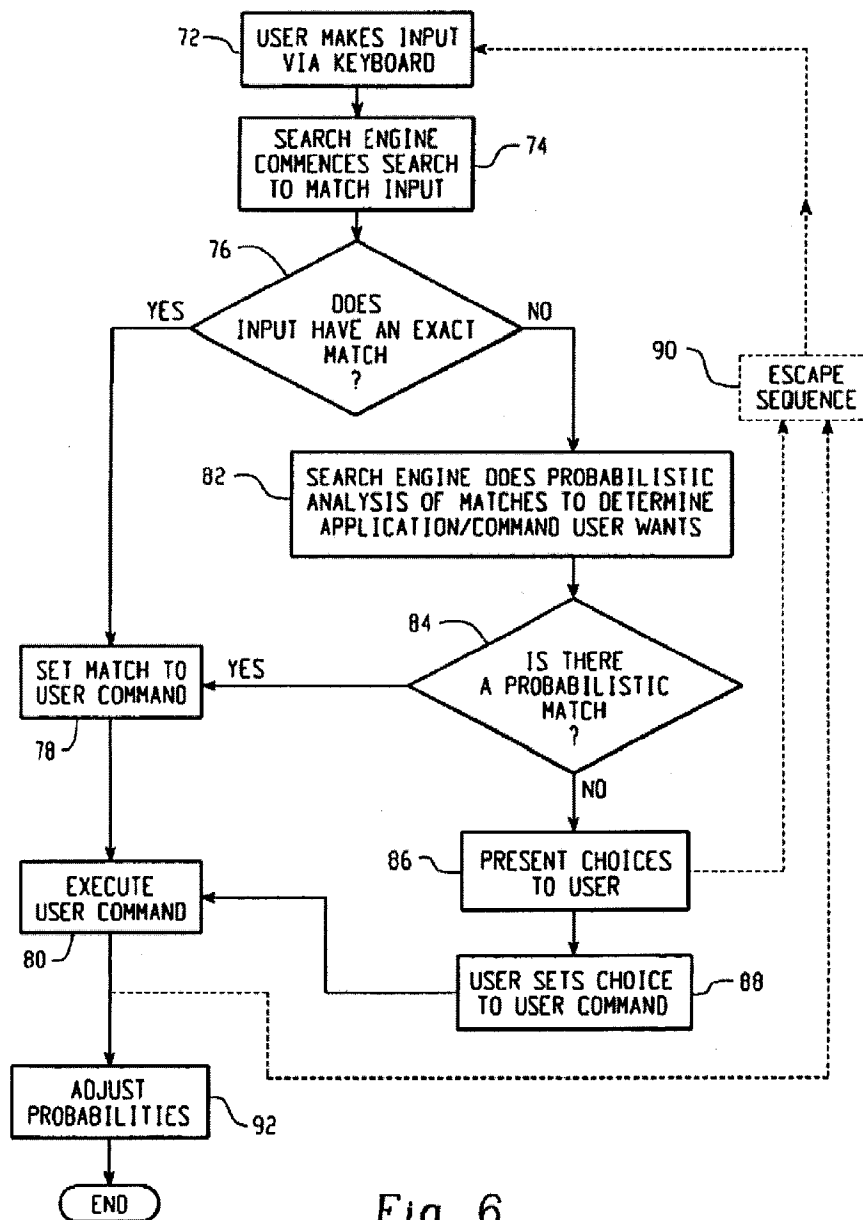
Accordingly, although the Examiner (Office Action mailed 7/26/07, citing *In re Johnson*) asserts "Any negative limitation or exclusionary proviso must have basis in the original disclosure", this lack-of-delimiter limitation DOES have a basis in the original disclosure, as presented above. And in contrast to this limitation of processing a command "without" entry of a delimiter, both cited references process a command only after receiving a delimiter, as explained above.

Independent Claim 54

Claim 54 relates to the probability of a command being desired by a user. Claim 54 recites executing a command, chosen based on its probability (of being desired by the user) exceeding a threshold. The command is executed despite its probability being less than 1, and without bothering to determine the probability that another command might be desired. Dependent claim 55 limits the probability threshold to 0.5. Claim 54 is amended to add "and without the command being first displayed to and selected by the user."

This is supported in the application by the following passage, in conjunction with Fig. 6 (reproduced above):

> "[T]he natural language search engine 32 interprets which application command 56 ... is **likely desired by the user** based on a historical probability. Where a user command has a high likelihood, the natural language search engine 32 will **invoke that user command rather than expending processor resources searching for other alternatives**." (application, p.6, lines 3-8, emphasis added)

> "Referring again to **FIG. 6**, ... if any one of the results of step 76 has more than a 0.5 probability factor, then that result is a probabilistic match. The probabilistic match is then set to the user command at step 78, and executed in step 80." (application, p.7, lines 18-21)

This indicates that a list of the probable commands is normally displayed (step 86) to enable the user to select the command to be executed (step 80). This display step (86) is circumvented if the probability exceeds a threshold of 0.5, and the command is instead executed directly (step 80), without being first displayed to and selected by the user.

This is not disclosed by the cited references to Beauregard and Ramaswamy. Although Ramaswamy (col. 6, lines 17-29) states "the search for the best formal command is limited to a small set" of commands, he does suggest that the "small set be just <u>one</u> command, nor that the command be executed directly without it being first displayed to and selected by the user as claimed. Therefore, claim 54, is patentable over the cited prior art.

Independent Claim 56

Claim 56 recites displaying a list of frequently used commands "**as soon as** the user begins entering the command text string". This limitation is supported in the application at p. 9, lines 14-17, but is not disclosed by the cited references to Beauregard and Snapper. Although the Examiner notes that Beauregard presents a list of probable commands, he does not do this "**as soon as** the user begins entering the command text string" as claimed. In fact, on the contrary, Beauregard presents the list only after the space bar is pressed twice to indicate the **end** of command entry. And Snapper is irrelevant to displaying **commands**, as explained in a previous Amendment filed 10/24/07. Therefore, claim 56 is patentable over the cited prior art.

Dependent Claims 5-13, 41-45, 49-50 and 55

The remaining claims all depend from base claims that are explained above to be patentable over the prior art. The limitations that the dependent claims add to the base claims distinguish them further from the prior art.

The application is therefore now in condition for allowance.

Respectfully submitted,

Mitchell Rose

Mitchell Rose (Reg. No. 47,906)
JONES DAY
901 Lakeside Ave.
Cleveland, OH 44114
Date: 8/15/08   (216)586-7094

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